UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
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Office of Environmental Review
and Assessment

October 11, 2016

Mary D'Aversa
Bureau of Land Management
Idaho Falls District
1405 Hollipark Drive
Idaho Falls, Idaho 83401

Dear Ms. D'Aversa:

In accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act, and the Council on Environmental Quality regulations for implementing NEPA, the U.S. Environmental Protection Agency has reviewed the Final Environmental Impact Statement for the proposed Rasmussen Valley Mine (EPA Project No. 11-011-BLM).

The FEIS analyzes the potential effects of Agrium's proposal to construct and operate a phosphate mine, located approximately 18 miles southeast of Soda Springs in Caribou County, Idaho. The FEIS identifies the Rasmussen Collaborative Alternative (RCA) as the Bureau of Land Management and U.S. Forest Service's Preferred Alternative. This alternative includes design features that address concerns about potential adverse effects on water resources by placing permanent waste storage in locations that are not directly connected to surface water or shallow groundwater.

The EPA provided comments on the draft EIS (letter dated November 2, 2015) raising concerns regarding predictive modeling, groundwater impacts, fugitive dust, climate change implications, and financial assurance. We note with appreciation that BLM staff coordinated with us, discussing aspects of the project and discussing concerns we raised in our comments on the draft EIS. We believe that the mine plan and mitigation measures now include design features that substantially reduce impacts to natural resources. Responses to our comments address many of the issues we raised on the draft EIS.

As a result of our review of the FEIS, we believe that remaining issues center on a need for more specificity about the following: sensitivity and uncertainty of modeled predictions related to cover performance, fugitive dust suppression, points of compliance, and financial assurance. Our detailed comments regarding these issues are included in the attachment. We appreciate your time during a recent call to talk with us about suggestions to address these issues.

If you need more information or would like to discuss these comments further, please contact me at 206-553-1601 or by email at littleton.christine@epa.gov, or contact Lynne Hood of my staff at (208) 378-5757 or by email at hood.lynne@epa.gov.

Sincerely,

Christine B. Littleton

Christine B. Littleton, Manager
Office of Environmental Review and Assessment

cc: Bill Volk, BLM Project Lead

Enclosure:

1. EPA Detailed Comments on the Rasmussen Valley Mine Final Environmental Impact Statement

EPA Detailed Comments on the Rasmussen Valley Mine
Final Environmental Impact Statement

EPA's outstanding concerns regarding modeled predictions, fugitive dust, points of compliance, and financial assurance are described below. We recommend that these be addressed in the Record of Decision and/or when approving the final Plan of Operations and mitigation/monitoring plans.

Predictive Modelling Sensitivity Analysis: Precipitation Values
We continue to have concerns about the precipitation values used to model performance of the cover system. The values used to model precipitation do not adequately encompass the upper range of precipitation that areas in SE Idaho receive. For example, the maximum precipitation value used in the model is 37.36 in/year; however, the maximum precipitation value recorded for this region between 1981 and 2013 was 50 in/year.

A preferred approach would be to assess the impacts from a year that received the maximum precipitation. Precipitation for this region exceeded the 37.36 in/year value in 9 of the last 33 years. Because this model is being used to understand the infiltration of water through the proposed cover systems, it is critical to understand what occurs during years when precipitation amounts are at their highest. We recommend that maximum precipitation values be modeled and that a mitigation/adaptive management plan be developed to address impacted groundwater in the event that infiltration rates differ from those predicted.

Predictive Modelling Sensitivity Analysis: Rate of Transpiration/Evapotranspiration
We are concerned that the leaf area index (LAI) values used in calculating transpiration/infiltration do not consider potential vegetation that exists in the region and that has lower LAI values. The model for Rasmussen Valley uses a singular LAI value of 2.0. Several of our comments on the draft EIS raised this issue (e.g., Response to Comments 4d, 6j, 6n). In our review, we found that the response to our comments did not adequately address our concerns. As stated above, understanding the amount of water that can potentially infiltrate capped materials is critical for identifying potential impacts of the mining operation. During our conversation with BLM staff, there was agreement that the LAI is a key factor governing the water balance because it affects the relative amount of water infiltration versus the amount released via evapotranspiration.

Our first concern with the LAI parameter is that model sensitivity analysis was not performed on this variable. Therefore, no quantitative information is available on the degree of influence this variables has on the model outputs. Our second concern is about the value of 2.0 that is used in the model. The statement is made in several places in the response to comments that this is a conservative number. While an LAI of 2.0 may be attainable at this site, it seems not unlikely that vegetation with a lower LAI could establish on the site. For example, using remote sensing imagery of LAI throughout North America, shows that the SE region of Idaho has average LAI values <2 (Ran et al. 2015[1]). While a diverse seed mix will be applied to the site that encourages a multi-layer plant cover, this is certainly not

[1] Ran, L.M., Gilliam, R., Binkowski, F.S., Xiu, A.J., Pleim, J. and Band, L. (2015) Sensitivity of the Weather Research and Forecast/Community Multiscale Air Quality modeling system to MODIS LAI, FPAR, and albedo. Journal of Geophysical Research-Atmospheres 120(16), 8491-8511.

guaranteed to become established in a region that is typically characterized by low LAI values. If the vegetation that establishes on the site has a lower LAI than 2.0, then the amount of water that infiltrates may be larger than what is predicted in the EIS.

Fugitive Dust

Fugitive dust releases from active mines have been identified as a source of heavy metal exposure to surrounding communities (Kerin and Lin 2010[2]). The EIS acknowledges that the mine will increase fugitive dust emissions, but that the magnitude of these emissions will be controlled by a fugitive dust control plan. The Response to Comments states that "Dust suppression is run on a see/no-see policy." However, specific details on the assumed control efficiency of the dust suppression plan are not provided such as a specific schedule of dust suppression activities, whether it will be part of the formal duties of staff to assess dust conditions, and how the dust suppression activities will be documented. While Table 4.2-4 provides an estimate of the fugitive dust emissions (mass per time), it does not address the chemical composition of the particles being released and in particular, selenium concentrations being of specific interest. As a result, we continue to feel that this potential source of selenium inputs to the Blackfoot river are not adequately characterized in this EIS. We recommend that the Record of Decision and Plan of Operations provide specific details regarding monitoring including methods, frequency and enforcement mechanism that would be used to address fugitive dust releases if necessary.

Groundwater Points of Compliance

During the draft EIS, Agrium had not yet applied for Points of Compliance from the Idaho Department of Environmental Quality under the "Ground Water Quality Rule." IDEQ's policy is aimed at protecting groundwater while allowing mining activities to take place. To implement this policy, the rule allows mine operators to request that IDEQ set points of compliance outside the mining area, rather than within the mining area, where they must monitor, sample, and report on ground water and meet the ground water quality standards.

The Final EIS has been updated and a summary is included stating that Agrium has applied for POCs and that a groundwater monitoring plan is required as part of the permit. However, the final EIS did not include information about the monitoring plan or location of the points of compliance. Because groundwater would be exceeded without IDEQ POCs, we believe that this information is critical in evaluating the extent of groundwater contamination allowed and in determining compliance outside mine area of influence. We recommend that the ROD include details regarding POCs, monitoring, and best management practices that would be implemented to protect groundwater.

Financial Assurance

The FEIS continues to lack critical information regarding financial guarantees. While the document includes a general section on reclamation and financial assurance, there is no detail regarding estimated costs or information regarding potential long-term monitoring. We recommend that the Record of Decision disclose the estimated cost to reclaim and close the site in a manner that achieves reclamation

[2] Kerin, E.J. and Lin, H.K. (2010) Reviews of Environmental Contamination and Toxicology, Vol 206. Whitacre, D.M. (ed), pp. 49-63.

goals and post-mining land use objectives. The proposed financial assurance mechanisms should also be identified.

As we have discussed previously, one of our primary concerns with mining is securing adequate financial assurance for reclamation, closure and post closure activities. NEPA provides for the disclosure of all information concerning environmental consequences of a proposed action to the public and decision-makers before the decisions are made and before actions are taken. One key aspect that should be discussed is the likelihood that mitigation will be implemented[3]. Although NEPA regulations do not directly refer to disclosure of financial assurances, the amount and viability of financial assurance are key factors in a discussion of whether mitigation will be implemented. The amount and viability of financial assurance are critical factors in determining the effectiveness of reclamation and closure activities and, therefore, the significance of the environmental impacts.

[3] CEQ. 2011. "Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact."
http://ceq.hss.doe.gov/current_developments/docs/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf